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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,191	09/29/2005	Barry Raymond Hill	021500-140	3920
21839 7590 09/13/2007 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER AKANBI, ISIAKA O	
			ART UNIT 2886	PAPER NUMBER
			NOTIFICATION DATE 09/13/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/551,191

Applicant(s)

HILL ET AL.

Examiner

Isiaka O. Akanbi

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :29 September 2005 and 02 August 2006 .

DETAILED ACTION

Preliminary Amendment

The preliminary amendment filed on 31 May 2007 has been entered into this application.

Information Disclosure Statement

The information disclosure statement filed on 29 September 2005 and 02 August 2006 has been entered and considered by the examiner.

Drawings

The drawings filed on 31 May 2007, has been accepted for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential method steps for obtaining the virtual image plane is positioned in front of the object. The method steps must be organized and correlated in such a manner as to present a complete method of forming the virtual image plane that is positioned in front of the object.

For examination purposes the examiner has assumed that as long as a virtual image plane can be formed behind the object forming a virtual image plane that is positioned in front of the object can also be achieved.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 9-18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-18 of copending Application No. 10/548,661. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in application (191) anticipate the claims of application

Art Unit: 2886

(661). This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. The claims of the applications correspond to each other as follows:

10/551,191	10/548,661
1	1,2
2	1,2
3	1,2
9	1,2
10	1
11	2
12	3
13	4,10
14	11,5,12
15	6,13
16	7
17	8
18	9
19	7,16

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 9-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Guering et al. (5,694,479).

Regarding to claims 1 and 9, Guering discloses a method of forming a shadowgraph image of an object comprising forming the image as a virtual image on a virtual image plane (fig. 1)(col. 3, line 13-15)(col. 4, line 2-6).

As to claims 2-3, Guering also discloses illuminating the object (3) with a light beam/source (i.e. collimated light beam) from a localised light source to create a shadowgraph image on the virtual image plane and the virtual image plane is positioned behind the object (fig. 1)(col. 2, line 23-35).

As to claims 10 and 18, Guering discloses a method of determining the optical quality of a glazing (figs. 1-3), which includes at least one area having a reduced light transmission comprising the following steps:

producing a shadowgraph image of the glazing (Fig. 1: 3), measuring (6) the illumination of the glazing at a plurality of measurement points arranged in an array extending over the glazing, determining any deviation (i.e. defects) in illumination at those points from a desired value at each point (col. 2, line 23-35), wherein the at least one area of reduced light transmission is omitted (i.e. prohibited) from the array of measurement points (col. 2, line 36-41).

As to claims 11, 12 and 13, Guering discloses a method to determine the optical quality of a glazing comprising of the following steps:

illuminating the glazing (3) with a localized light source (2) to produce a shadowgraph image (fig. 1: 5), recording (4) the shadowgraph image, determining (6) valid measurement points of the shadowgraph image which excludes those points which correspond to obscured areas of the glazing, processing the recorded shadowgraph image to determine an illumination value for each valid measurement point (col. 2, line 24-41), constructing a reference image by scanning a convolution window point by point over the processed image and using a convolution filter to calculate a reference illumination value at points of the reference image which correspond to each point of the processed image by averaging the illumination values of the valid measurement points of the processed image covered by the convolution window and

Art Unit: 2886

comparing the illumination value of each valid measurement point of the processed shadowgraph image with corresponding points of the reference image to determine the optical quality of the glazing (fig. 1)(col. 2, line 54-64)(col. 3, line 13-col. 4, line 16) and wherein the convolution window is of constant area during the scanning operation (see abstract)(col. 4, line 50-52).

As to claim 14, Guering also discloses the limitation wherein a valid measurement point is one in which the illumination value at that point is equal to or above a pre-set threshold (i.e. weighted average)(col. 2, line 24-36).

As to claims 15 and 16, Guering further discloses the limitation wherein when the point of the convolution window for which the reference illumination is being calculated corresponds with a non-valid measurement point of the processed image, a reference illumination is not calculated and wherein non-valid measurement points are not taken into account in the construction on the reference image (col. 2, line 54-58)(col. 4, line 17-42).

As to claim 17, Guering also discloses using the same light source (2) for the production of the shadowgraph image (5) and in relation to calculating the reference image (fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guering et al. (5,694,479).

As to claims 4, Guering fails to specify that the virtual image plane be positioned in (i.e. front of the object), however, since Guering does not limit the position where the virtual image plane is formed (i.e. front/behind of the object), it would have been at least obvious to one having ordinary skill in the art at the time of the invention was made to form at any desired position (i.e. front/behind of the object) the virtual image plane of shadowgraph image for the purpose of providing a more accurate measurement.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guering et al. (5,694,479) in view of Park (2002/0135831 A1)

As to claims 5-8, Guering discloses using a localized light source (col. 2, line 23-35).

Guering fails to specify that the light source is (i.e. LED/laser source) which is collimated by a (i.e. lens/mirror) optical system and a wedge prism that is used to tilt the virtual image plane, however, since Guering does not limit the light source to be used, it would have been at least obvious to one of ordinary skill in the art at the time of the invention was made to use any

Art Unit: 2886

suitable light source (i.e. LED/laser source) for the purpose of evaluating the optical quality of a glass accurately. Additionally, it would have been at least obvious to one of ordinary skill in the art at the time of the invention was made to use any suitable light source (i.e. LED/laser source), since the method as disclosed by Guering works just as well with any light source.

Further, it would have been at least obvious to one of ordinary skill in the art at the time of the invention was made to use a (i.e. lens/mirror) optical system and a wedge prism to tilt the virtual image plane, since as evidenced by Park, it is a conventionally known optical system layout of a laser collimator. See (figs. 4A-B: 12, 14, 46, 48)(par. 0010).

Additional Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references listed in the attached form PTO-892 teach of other prior art a method of determining the optical quality of a glazing that may anticipate or obviate the claims of the applicant's invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur R. Chowdhury can be reached on (571) 272-2287. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2886

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi

August 29, 2007


TARIFUR CHOWDHURY
SUPERVISORY PATENT EXAMINER